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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,395	10/27/2000	Topi Koskinen	460-009824-US(PAR)	2829

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EXAMINER	
SEFCHECK, GREGORY B	

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/697,395	KOSKINEN ET AL.	
	Examiner	Art Unit	
	Gregory B. Sefcheck	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-8,10-13,15-19,21,22 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-8, 10-13, 15-19, 21, 22, and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 8/6/2007 is acknowledged
- Claims 1, 5, 11-15, 17-20, and 24 have been amended.
- Claims 4, 14, and 20 have been cancelled. Claims 9 and 23 were previously cancelled.
- Claims 1-3, 5-8, 10-13, 15-19, 21, 22, and 24 remain pending.

Claim Objections

1. Claim 18 is objected to because of the following informalities:

Claim 18 recites a circuit configured to "set up a circuit-switched connection", rather than to "establish a circuit-switched connection", as in claim 11. Therefore, "establish" on line 19 of claim 18 should be changed to - - set up - - in order to maintain consistency throughout the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 24 is directed to a "computer program product", which does not constitute statutory subject matter such as a process, machine, article of manufacture or composition of matter. In contrast, a claimed computer-readable medium having

instructions is a computer element which defines structural and functional interrelationships between the instructions and the computer to permit the instructions functionality to be realized, and is thus statutory. Examiner suggests changing the claim's preamble to read "A computer-readable medium having stored thereon a computer program product executable in a data processing device..." (Please see pages 30 and 53 of the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 6-8, 10-13, 16-19, 21-22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frid et al. (US006560239B1), hereafter Frid.

- In regards to Claim 1, 2, 8, 10, 11, 16, 18, 21, 22, and 24

Frid discloses a method, system, terminal, and software implementation for retaining a packet data (first) connection in a wireless system during a circuit-switched (second) connection to the wireless terminal (Title; Abstract; Col. 4, lines 33-52; meets claim 1,11,18,24 – first connection is a packet connection and second connection is a

circuit-switched connection; claim 10,16,22 – terminal is a wireless terminal and network is a mobile communication network).

Referring to Fig. 3, Frid shows establishing a packet data connection between a terminal and a packet-switched network, including negotiating a communications protocol with a peer, such as a server associated with an Internet Service Provider or ISP (302-310; Col. 5, lines 20-30; claim 1,11,18,24 – circuit/code section configured to establish data connection between application server of network and terminal using packet data service as bearer).

Frid further shows establishing a circuit-switched connection between the terminal and the network (Fig. 3, 326; claim 1,11,18,24 – circuit/code section configured to establish circuit-switched connection between network and terminal).

Frid shows that the terminal sends a message (318) for interrupting the packet data connection while maintaining the connection protocol with the server (320-322) before establishing the voice call (324-326; claim 1,11,18,24 – circuit/code section configured to interrupt the packet data service for the time of the circuit-switched connection; claim 1,11,18,24 – circuit/code section configured to set up a message for maintaining the packet data connection in connection with setting up of the circuit-switched connection; claim 1,11,18,24 – circuit/code section configured to automatically start the setting up of the message maintaining the packet data connection; claim 1,11,18,24 – circuit/code section configured to transmit message before establishing circuit-switched connection; claim 2 – message for maintaining the packet data connection is generated in the terminal and transmitted from the terminal to the server

of the network; claim 8,21 – maintenance message is supplemented with a "no operation" command).

Frid does not explicitly disclose the message includes a command to reset an application level time-out counter in the server.

However, Frid discloses that any applications associated with the packet data connection that have not timed-out may be re-established upon termination of the circuit-switched call and reactivation of the packet data connection (Abstract; Col. 3, lines 5-7; Col. 7, lines 15-18; Col. 8, lines 30-55; Col. 9, lines 30-41). Therefore, the setting (resetting) of a timer or counter associated with the applications of the interrupted/maintained packet data connection would monitor for the disclosed time-out.

It would have been obvious to one of ordinary skill in the art at the time of the invention to explicitly include a command to reset a time-out counter for purposes of re-establishing applications associated with the packet data connection in the maintenance message of Frid. One would be motivated to make such a modification because applications of packet data connections that are interrupted and maintained during an accepted circuit-switched call can only be re-established if they have not timed-out (Frid, above citations). Therefore, setting a counter upon interruption would allow for the monitoring of time-out conditions for the applications of the packet data connection.

- In regards to Claim 3 and 13,

Frid discloses a method, system, terminal, and software implementation for retaining a packet data (first) connection in a wireless system during a circuit-switched (second) connection to the wireless terminal that covers all limitations of the parent claims.

Frid shows that the network maintains the parameters of the packet data connection (claim 3,13 – message for maintaining the PPP parameters of the packet data connection is set up at the peer – server – to which the terminal is connected) following receiving an acceptance message from the terminal for the circuit-switched connection (Fig. 3, 318-322; Col. 7, lines 32-65; claim 3,13 – sending information about interrupting the packet data connection from the terminal to the network).

- In regards to Claim 6, 7, and 19,

Frid discloses a method, system, terminal, and software implementation for retaining a packet data (first) connection in a wireless system during a circuit-switched (second) connection to the wireless terminal that covers all limitations of the parent claims.4

Frid shows that the packet data connection may communicate information between the network and a termination endpoint, such as the Internet or a server on a LAN (Col. 1, lines 27-35; Col. 5, lines 20-30; claim 6,7,19 – network communicates with a LAN/Internet; claim 6,7,19 – packet data connection is between terminal and server in LAN/Internet)

When the circuit-switched connection is accepted and the maintenance of the packet data connection is set up, the maintenance message is received at the termination endpoint (Fig. 3, 318-322; Col. 7, lines 57-65; claim 6,7,19 – network transmits maintenance message to server/Internet).

- In regards to Claim 12,

Frid discloses a method, system, terminal, and software implementation for retaining a packet data (first) connection in a wireless system during a circuit-switched (second) connection to the wireless terminal that covers all limitations of the parent claims.

Frid shows that the terminal is equipped to generate and transmit a message to the network indicating that the packet data connection is to be maintained during a circuit-switched connection (Fig. 3, 318-322; Col. 7, lines 18-55; claim 12 – circuit configured to generate and transmit the message for maintaining the packet data connection).

- In regards to Claim 17,

Frid discloses a method, system, terminal, and software implementation for retaining a packet data (first) connection in a wireless system during a circuit-switched (second) connection to the wireless terminal that covers all limitations of the parent claims.

Frid discloses a terminal that comprises circuitry for processing (processor; claim 17 – terminal comprises a data processor) messages for the retention of a packet data connection for the duration of a circuit-switched connection (Fig. 3, 318-322; Col. 11, lines 6-31; claim 17 – circuit configured to set up message for maintaining the packet data connection are arranged in the data processor).

6. Claims 5, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frid in view of Chen et al. (US006198945B1), hereafter Chen.

- In regards to Claim 5, 15 and 20,

Frid discloses a method, system, terminal, and software implementation for retaining a packet data (first) connection in a wireless system during a circuit-switched (second) connection to the wireless terminal that covers all limitations of the parent claims.

Frid does not explicitly show selecting and adding a telephone number to the message for setting up the circuit-switched connection. Frid also does not show transmitting the maintenance message for the packet data connection after selecting the telephone number but before setting up the circuit-switched connection.

Chen discloses a method and system that enables a mobile terminal to place a first connection on hold while initiating a second connection by selecting a telephone number and adding that number to a message for setting up a second connection (Fig. 3, Col. 6, lines 15-63; claim 5,15,20 – circuit configured to select and add a telephone

number to message for setting up the second connection; claim 5,15,20 – message maintaining the packet data connection is transmitted after the selection of a telephone number, before setting up the circuit-switched connection)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method, system, and terminal of Frid by selecting a telephone number for setting up the circuit-switched connection before maintaining the packet data connection and setting up the circuit-switched connection, as shown by Chen. This modification would allow a packet data connection to be maintained during either an incoming or an outgoing circuit-switched connection.

Response to Arguments

7. Applicant's arguments filed 8/6/2007 have been fully considered but they are not persuasive.

- In the Remarks on pg. 9 of the Amendment, Applicant contends that transmitting a maintenance message before establishing a circuit switched connection is not disclosed by Frid
- The Examiner respectfully disagrees. As now shown in the rejection, Frid discloses message 318 for maintaining a previously established data connection before establishing a voice call (circuit switched connection) at step 326.

- In the Remarks on pg. 9-10 of the Amendment, Applicant contends that the presently amended independent claims clearly define two distinct messages for resetting the application time-out counter and accepting the circuit-switched connection. Applicant alleges that Frid does not disclose this implementation. Applicant further contends that message 318 of Frid clearly is already starting establishment of the circuit-switched connection.
- The Examiner respectfully disagrees. Firstly, the Examiner disagrees with Applicant's contention that the presently amended independent claims clearly define two distinct messages, one for resetting the application time-out counter and another for accepting the circuit-switched connection. The claims only explicitly define the message for resetting the application time-out counter. A separate message for accepting the circuit-switched connection is not explicitly claimed, as alleged by Applicant. Furthermore, even if the claims did explicitly recite these two distinct messages, Fig. 3 of Frid discloses such a configuration. Contrary to Applicant's assertions, message 318 initiates maintenance of the data connection (and resets application time-out counter) while message 324 accepts the circuit switched connection.

- In the Remarks on pg. 10 of the Amendment, Applicant contends that Frid does not pertain to solving the same problem as the present application, where Frid deals with re-establishment of the PS bearer and the present application pertains to application-level timeout during an interrupted PS

bearer. Applicant contends that it would not be obvious to modify Frid based upon these differences.

- The Examiner respectfully disagrees. While Frid does pertain to re-establishment of a packet-switched bearer service after interruption by a circuit-switched call, as stated by Applicant, Frid also acknowledges the reactivation of applications associated with the packet-switched bearer as long as the applications have not timed-out (See Frid, citations provided in the rejection above). The Examiner acknowledges that Frid does not explicitly disclose application level timers. However, the disclosures in Frid do suggest such a modification, since determination of application time-out would require monitoring for the time-out condition.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Sefcheck
Patent Examiner
10-2-2007